



# SaniForce™

Bin Evacuation Systems for the Sanitary Industry

POWERFUL  
ADVANCED  
TECHNOLOGY



Evacuate viscous products from 1135 l (300-gallon) containers without dilution

- Extremely fast evacuation with flow rates up to 1135 l/min (300 gpm)
- Designed with inflatable wiper seals for increased efficiency and faster change of bins
- Unique floating ram plate eliminates the need for exact positioning of bin under the ram plate
- Available in manual and electronic control options

PROVEN QUALITY. LEADING TECHNOLOGY.

# Ordering Information

## SANIFORCE BES

BES Part No.	Max. Working Fluid Pressure per pump bar (MPa - psi)	Pump Part No.	Pump Quantity	Pump Description	Control Type	BIN Manuf.
BESA4C	28 (2.8 - 400)	24G742	2	SaniForce 5:1	Manual	Pallecon
BESA7A	28 (2.8 - 400)	24G742	2	SaniForce 5:1	Electronic	Plywood
BESA7C	28 (2.8 - 400)	24G742	2	SaniForce 5:1	Manual	Plywood
BESA7F	28 (2.8 - 400)	24G742	2	SaniForce 5:1	Electronic	Plywood
BESB7B	28 (2.8 - 400)	24G742	4	SaniForce 5:1	Electronic	Plywood
BESB7D	28 (2.8 - 400)	24G742	4	SaniForce 5:1	Manual	Plywood
BESE1A	83 (8.3 - 1200)	24F625	2	SaniForce 12:1	Electronic	Arena
BESE1C	83 (8.3 - 1200)	24F625	2	SaniForce 12:1	Manual	Arena
BESE5C	83 (8.3 - 1200)	24F625	2	SaniForce 12:1	Manual	Pallecon
BESF6B	83 (8.3 - 1200)	24F625	4	SaniForce 12:1	Electronic	Arena
BESF6D	83 (8.3 - 1200)	24F625	4	SaniForce 12:1	Manual	Arena
BESF9B	83 (8.3 - 1200)	24F625	4	SaniForce 12:1	Electronic	TNT
BESF9D	83 (8.3 - 1200)	24F625	4	SaniForce 12:1	Manual	TNT

Note: Systems can be special ordered for bin types other than plywood. Contact your sales rep for additional information.

## SANIFORCE 3150 BES

Part No.	Type	Bin Manuf.	Control Type	Outlet Size	Diaphragm /Ball Material**
BES3P3	Ball	Plywood	Manual	76 mm (3")	Santoprene/ PTFE
BES3P1	Ball	Plywood	Electronic	76 mm (3")	Santoprene/ PTFE
BES4P3	Flapper	Plywood	Manual	76 mm (3")	Santoprene/ N/A
BES8B3	Ball	Pallecon	Manual	76 mm (3")	Overmolded EPDM
BES3A1	Ball	Arena	Electronic	76 mm (3")	Santoprene/ PTFE
BES4A1	Flapper	Arena	Electronic	76 mm (3")	Santoprene/ N/A

Note: Contact marketing for ordering information on non-plywood bins. \*\*3A Approved EPDM diaphragm is available for heavy duty applications.

# Technical Specifications

## SANIFORCE BES

BES Part No.	BESAxx	BESBxx	BESExx	BESFxx
Max. working fluid pressure	28 bar (2.8 MPa - 400 psi)		83 bar (8.3 MPa - 1200 psi)	83 bar (8.3 MPa - 1200 psi)
Compressed air requirement	5.5-7 bar (0.55-0.7 MPa/80-100 psi)		5.5-7 bar (0.55-0.7 MPa/80-100 psi)	5.5-7 bar (0.55-0.7 MPa/80-100 psi)
Pneumatic control panel specifications				
Max. inlet air pressure	5.5 bar (0.5 MPa - 80 psi)		7 bar (0.7 MPa - 100 psi)	7 bar (0.7 MPa - 100 psi)
Air inlet size	3/4" npt(f)		3/4" npt(f)	3/4" npt(f)
Air inlet pump	1/2" npt(f)		1/2" npt(f)	1/2" npt(f)
Fluid Displacement (each pump)	0.87 liter/cycle (0.23 gal/cycle)		0.52 liter/cycle (0.14 gal/cycle)	0.52 liter/cycle (0.14 gal/cycle)
Max. Flow @ 60 cpm*	106 l/min (28 gpm)	204 l/min (54 gpm)	64 l/min (17 gpm)	128 l/min (34 gpm)
Pressure ratio	5:1		12:1	12:1
Air consumption @ 40 psi (each pump)	~0.08 m³/min per 3.7 l (2.95 scfm per gpm) / 2.8 bar (0.28 MPa)		~0.21 m³/min per 3.7 l (7.5 scfm per gpm) / 2.8 bar (0.28 MPa)	~0.21 m³/min per 3.7 l (7.5 scfm per gpm) / 2.8 bar (0.28 MPa)
Pump outlet	2 in tri-clamp		2 in tri-clamp	2 in tri-clamp
Communication	RS232 Serial		RS232 Serial	RS232 Serial
Electrical requirements	110 VAC (60 Hz), 15A		110 VAC (60 Hz), 15A	110 VAC (60 Hz), 15A
Overall dimensions m (inch)	1.72 W x 1.52 D x 3.0 H (69 W x 60 D x 118.8 H)		1.72 W x 1.52 D x 3.0 H (69 W x 60 D x 118.8 H)	1.98 W x 1.52 D x 3.0 H (78 W x 60 D x 118.8 H)
Evacuation efficiency	2 pumps: 98% 4 pumps: 99%		N/A	N/A
Instruction manual	311163		311163	311163

\* Flow rates based on full displacement of lower and S.G. = 1

Note: Graco's BES packages are available for a variety of manufacturers' bins and custom systems can be built upon request. Contact your Graco representative for more information.

## SANIFORCE 3150 BES

3150 BES Part No.	BES3xx	BES4xx
Max. working fluid pressure	8.4 bar (0.84 MPa - 120 psi)	
Compressed air requirement	5.5-8.4 bar (0.55-0.84 MPa / 80-120 psi)	
Pneumatic control panel specifications		
Max. inlet air pressure	8.4 bar (0.84 MPa - 120 psi)	
Air inlet size	3/4" npt(f)	
Air inlet pump	1/2" npt(f)	
Fluid Displacement (each pump)	3.89 liter/cycle (1.03 gal/cycle)	
Max. Flow @ 145 cpm*	1135 l/min (300 gpm)	
Pressure ratio	1:1	
Air consumption @ 4.9 bar (70 psi) -> each pump	~0.02 m³/min per 3.7 l (0.8 scfm per gpm) / 4.8 bar (0.48 MPa)	
Pump outlet	3" tri-clamp	
Max. suction lift	5.5 m (18 ft) wet	3.0 m (10 ft) wet
Max. diaphragm operating temperature (Santoprene, 3A Approved EPDM)	82.2°C (180°F), 135°C (275°F)	
Typical sound level at 4.9 bar (70 psi) air @ 50 cpm	85 dBa	
Weight	1360 kg (3,000 lb)	
Instruction manual	311163	

\* Flow rates are with muffler and slightly vary based on diaphragm material. Displacement per cycle may vary based on suction condition, discharge head, air pressure and fluid type.

## Additional Pumps and Packages

Graco offers the most complete range of pumps, packages and systems to meet all of your application and cleaning requirements. Whether the material you use comes in pails, drums, bins, totes or tankers, Graco pumps and cleaning systems are designed to provide years of reliable service!

All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Graco is certified ISO 9001.

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